

Claims

I claim:

5 1. A protective shield for a drilling or cutting tool comprising: a) a cylindrical-shaped housing having a front end and a back end, said front end able to fit flush against a working surface; and

10 b) a spring having a first end and a second end, said first end able to receive said back end of said cylindrical-shaped housing and said second end able to receive a drilling or cutting tool chuck, said cylindrical-shaped housing able to receive debris from said drilling or cutting tool operation.

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2. A device according to claim 1 wherein said cylindrical-shaped housing is conical cylinder shaped, semi-elliptical cylinder shaped, semi-oval cylinder shaped, semi-elliptical conical shaped or semi-oval conical shaped.

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3. A device according to claim 1 wherein said housing is cup-shaped.

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4. A device according to claim 1 wherein said housing is made of a durable heat resistant and impact resistant material.

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5. A device according to claim 1 wherein said housing is transparent.

6. A device according to claim 1 further comprising a foam tube, said foam tube having an exterior surface and an interior surface, said exterior surface able to be received within said spring and said interior surface able to receive a drilling or cutting tool bit.
7. A device according to claim 1 wherein said protective shield further comprises a chamber formed between said drilling or cutting tool chuck and said cylindrical-shaped housing near said back end to receive debris from said drilling or cutting tool.
8. A device according to claim 1 wherein said cylindrical-shaped housing further comprises a magnet to capture magnetically susceptible debris from said drilling or cutting tool operation.
9. A device according to claim 1 wherein said front end of said cylindrical-shaped housing further comprises a sliding means to protect said working surface from damage.
10. A device according to claim 1 wherein said cylindrical shaped housing further comprises bristle fibers along said front end.
11. A device according to claim 1 further comprising a guide to maintain the centerline of said protective shield on the centerline of said drilling or cutting tool, said guide having top and bottom ends and internal and external surfaces, said internal surface

of said bottom end able to receive a drilling or cutting tool chuck and said external surface able to receive said first end of said spring, said top end external surface able to be received by said back end of said cylindrical-shaped housing said top end having a retention means so that said cylindrical-shaped housing is maintained on said guide during use said second end of said spring able to receive said back end of said cylindrical-shaped housing.

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12. A device according to claim 10 wherein said guide is made of a heat resistant, impact resistant material.
13. A device according to claim 10 wherein said protective shield further comprises a chamber formed between said drilling or cutting tool chuck and said guide to capture debris from said drilling or cutting tool operation.
- 20 14. A device according to claim 10 wherein said guide further comprises a magnet to receive magnetically susceptible debris from said drilling or cutting tool operation.
- 25 15. A device according to claim 1 further comprising an extension means, said extension means comprising a first tubular body and a second tubular body, said first tubular body having a upper, a lower end, an outer surface and an inner surface, said upper end able to receive said second end of said spring; said second tubular body having a primary end, a secondary end, an inside surface and an outside surface, said

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secondary end able to receive said drilling or cutting tool chuck, said inside surface able to receive said lower end of said first tubular body.

5 16. A device according to claim 1 wherein said protective shield further comprises a lighting means to illuminate said working surface.

10 17. A device according to claim 14 wherein said lighting means comprises a power supply connected to at least one light source and a switch connected between said power supply and said at least light source to control the supply of power to said at least one light source.

15 18. A device according to claim 15 wherein said at least one light source is at least one light emitting diode.

19. A method for preventing injury from debris resulting from the operation of a drilling or cutting tool comprising the steps of:

20 (a) affixing a protective shield onto said drilling or cutting tool, said shield comprising a cylindrical-shaped housing having a front end and a back end, said front end able to fit flush against a working surface and a spring having a first and second ends, said first end able to receive said back end of said cylindrical-shaped housing and said second end able to receive a drilling or cutting tool chuck, said cylindrical-shaped housing able to receive debris from said drilling or cutting tool during use; and

25 (b) operating said drilling or cutting tool.

20. A kit comprising at least one protective shield for a drilling or cutting tool comprising a cylindrical-shaped housing having a front end and a back end, said front end able to fit flush against a working surface
5 and a spring having first and second ends, said first end able to receive said back end of said housing and said second end able to receive a drilling or cutting tool chuck, said cylindrical housing able to receive debris from said drilling or cutting tool during use; and at least one guide to maintain the centerline of
10 said protective shield on the centerline of said drilling or cutting tool, said guide having top and bottom ends and internal and external surfaces, said internal surface of said bottom end able to receive a
15 drilling or cutting tool chuck and said external surface able to receive said first end of said spring, said top end external surface able to be received by said back end of said cylindrical-shaped housing said top end having a retention means so that said cylindrical-shaped housing is maintained on said guide
20 during use said back end of said cylindrical-shaped housing able to receive said second end of said spring.

25 21. A kit according to claim 20, further comprising at least one extension means said extension means comprising; a first tubular body and a second tubular body, said first tubular body having a upper, a lower end, an outer surface and an inner surface, said upper end able to receive said second end of said spring and said outer surface being threaded; said second tubular body having a primary end, a secondary end, an inside
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surface and an outside surface, said secondary end able to receive said drilling or cutting tool chuck, said inside surface being tressed to receive said lower end of said first tubular body.